

Claims

1. A control valve for a variable capacity compressor, which comprises a bellows main body retained as a pressure sensing element in a bellows case with an airtight structure and transfers expansion and contraction of the bellows main body in response to a variation in inlet pressure of the variable capacity compressor to a valve element through a valve rod supported to be movable in a valve lifting direction from a valve housing integral with the bellows case to thereby change a valve opening degree,

wherein a patch member is provided to a movable-side end portion of the bellows main body and is formed with a fitting recessed portion, a valve rod being fitted to be able to float in the fitting recessed portion and

a compression coil spring is disposed between the patch member and a lower patch member for supporting a fixed-side end portion of the bellows main body.

2. The control valve for a variable capacity compressor according to claim 1, wherein a contact end portion of the valve rod in contact with the fitting recessed portion is in a substantially central position in a bellows expanding/contracting direction of the bellows main body or on the fixed-side end portion side of the central position.

3. The control valve for a variable capacity compressor

according to claim 1, wherein an inner face of the fixed-side end portion of the bellows main body is supported on the lower patch member, an outer face of the fixed-side end portion is supported on an adjusting screw member provided to the bellows case, and a side face of the fixed-side end portion of the bellows main body is supported on an inner face of the bellows case.

4. The control valve for a variable capacity compressor according to claim 1, wherein a bottom portion of the fitting recessed portion forms a stopper face portion which can come in contact with a stopper face portion formed at a central portion of the lower patch member.

5. The control valve for a variable capacity compressor according to claim 1, wherein the fixed-side end portion of the bellows main body is mounted to the lower patch member substantially in the same shape as the patch member, a side face of the lower patch member is supported on a support tube portion formed to stand from the bellows case, and a stopper face portion formed at a central portion of the lower patch member is supported on a support portion extending from an adjusting screw member.

6. The control valve for a variable capacity compressor according to claim 1, wherein a ball is mounted in the fitting recessed portion and the valve rod is fitted to be able to float in the fitting recessed portion with a lower end of the valve rod in contact with the ball.